

REMARKS

All amendments and cancellation of claims are made without acquiescing to any of the Examiner's arguments or rejections, and solely for the purpose of expediting the patent application process in a manner consistent with the PTO's Patent Business Goals (PBG), and without waiving the right to prosecute the cancelled claims (or similar claims) in the future.

In the Office Action mailed September 24, 2010, the Examiner indicated that Figures 1 and 2 should be designated with a legend such as "prior art." Applicants provide herewith replacement Figures 1 and 2 labeled as suggested by the Examiner. Accordingly, applicants respectfully request that the objection be withdrawn.

In the Office Action mailed September 24, 2010, the Examiner objected to informalities in the specification. Applicants have amended the specification to remove the informalities. Accordingly, applicants respectfully request that the objection be withdrawn.

In the Office Action mailed September 24, 2010, the Examiner issued several rejections. Each of the rejections is discussed in detail below.

I. The Claims are Definite

The Examiner rejects Claims 1-11 under 35 U.S.C. 112, second paragraph, as allegedly indefinite. In particular, the Examiner states "the words "analyte/labeled," "labeled detector/analyte/unlabeled," "detector/analyte," "reference detector/reference" and material/unlabeled reference" and are vague and unclear. Applicants respectfully disagree with the rejection. Nonetheless, in order to further the business interests of the applicants, and without acquiescing to any of the Examiner's arguments or rejections, and solely for the purpose of expediting the patent application process in a manner consistent with the PTO's Patent Business Goals (PBG), and without waiving the right to prosecute the amended claims (or similar claims) in the future, applicants have amended the claims to recite "analyte-labeled," "labeled detector-analyte-unlabeled," "detector-analyte," "reference detector-reference" and material-unlabeled reference" to clarify that the expression refer to a conjugate of components recited in the phrases. Accordingly, applicants submit that the claims are definite and respectfully request that the rejection be withdrawn.

The Examiner further rejects Claims 1 and 5 as allegedly indefinite because the phrase “detector” is vague because it is not clear which detector the phrase refers to. Applicants respectfully disagree with the rejection. Nonetheless, in order to further the business interests of the applicants, and without acquiescing to any of the Examiner's arguments or rejections, and solely for the purpose of expediting the patent application process in a manner consistent with the PTO's Patent Business Goals (PBG), and without waiving the right to prosecute the amended claims (or similar claims) in the future, applicants have amended Claims 1 and 5 to refer to “labeled detector.” Accordingly, applicants submit that the claims are definite and respectfully request that the rejection be withdrawn.

II. The Claims are Not Subject to Double Patenting

The Examiner rejects Claim 5 under the judicially created doctrine of obviousness type double patenting as allegedly unpatentable over claim 1 of U.S. 7,371,58 to Nahm et al. (hereinafter Nahm). Applicants respectfully disagree. Nahm does not teach or suggest the elements of claim 5 of the presently claimed invention of an amount of the analyte among liquid samples being determined by a laser emitted from a laser beam shape control lens, an exciter filter, collection lens, collection lens, fluorescent filter, condenser lens, optical detector, CPU, and an analog digital converter (ADC). In addition, Nahm does not teach or suggest the elements of claim 5 of the presently claimed invention of a shape control lens for a laser beam and exciter filter.

Applicants also note that Nahm does not teach or suggest the elements of light emitted from a semiconductor laser being converted to a circular point about 100 micrometers in diameter or a narrow long elliptical shape about 2 mm long and about 100 micrometers wide by the shape control lens, and focused onto a surface of the sample, thereby maximizing the efficiency of laser light and amplification of light gathering power.

In addition, since the semiconductor laser emits a wavelength varying especially according to temperature and electric current, the excitation filter is used to prevent the wavelength of the incident light from being too close to the wavelength of fluorescence, and therefore the present invention has an excellent effect of simultaneously quantifying several analytes with a high sensitivity.

Therefore, claim 5 of the presently claimed invention is both patentably distinct from claim 1 of Nahm and also describes a device with a distinct purpose and performance characteristics. Accordingly, applicants submit that the claims are not subject to double patenting and respectfully request withdrawal of the rejection.

III. The Claims are Novel

The Examiner rejects Claim 1 under 35 U.S.C. 102(e) as allegedly anticipated by Nahm et al. (US 7,371,582; hereinafter Nahm). The Examiner states: “The amount of analytes is determined by passing a laser as claimed (Col. 3, lines 17-65; Col. 4, lines 1-12; Col 28, lines 1-41)” (Office Action, pg. 7).

Applicants respectfully disagree with the rejection. Nahm does not teach or suggest a lateral flow quantitative assay method. Claim 1 of the presently claimed invention recites that the amount of analytes is determined using a laser emitting from a shape control lens through an exciter filter, collection lens, fluorescent filter, condenser lens, optical detector, analog digital converter and a CPU.

In contrast, Nahm simply discloses analysis using an exciter filter (22), an elliptical reflecting mirror (23), spatial filter (25), collimator (26), an optical detector (27), and a computer (29) (Col. 3, lines 17-65; Col. 4, lines 1-12; Col. 28, lines 1-41). However, contrary to the presently claimed invention, Nahm does not teach or suggest relatively comparing the amount of the fluorescent light of the conjugate to the reference fluorescent light exhibited by the reference conjugate by passing a laser emitted from a shape control lens for a laser beam through an exciter filter, irradiating the filtered light by the epifluorescence medium containing the triple analyte conjugate and the reference conjugate, passing light reflected from the epifluorescence medium through a collection lens to form parallel light, passing the parallel light through a fluorescent filter, presenting the parallel light to an optical detector, and transmitting the incident parallel light to a CPU.

Accordingly, applicants submit that Nahm does not teach or suggest all of the elements of the presently claimed invention as required for rejection under 35 U.S.C. 102. Accordingly, applicants respectfully request that the rejection be withdrawn.

CONCLUSION

If a telephone interview would aid in the prosecution of this application, the Examiner is encouraged to call the undersigned collect at (608) 662-1277.

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